

HIGH SPEED DOME CAMERA

- 27X OPTICAL ZOOM**
- 37X OPTICAL ZOOM**

USER MANUAL





If the product is to be put out of operation definitively, take it to a local recycling plant for a disposal which is not harmful to the environment.

Please read the instructions carefully for correct use of the product and preserve it for reference purposes. This specification is subject to change without any prior notice to improve the quality.

〈Chapter 1. Warning and Cautions〉

1.1 FEATURES	6
1.2 WARNING AND CAUTIONS	7
1.3 WARNING	8
1.4 CAUTIONS	9

〈Chapter 2. Overview and How to install〉

2.1 ACCESSORIES	11
2.2 OVERVIEW 1	12
2.2.1 DIMENSION	12
2.2.2 DESIGNATION	13
2.2.3 CAMERA CONFIGURATION	14
2.3 OVERVIEW 2	17
2.3.1 TERMINAL CONFIGURATION	17
2.4 HOW TO INSTALL	19
2.4.1 CONNECTING THE CABLE TO TERMINAL BLOCK	19
2.4.2 SWITCH SETTING	19
2.4.3 CAMERA INSTALLATION	20
2.5 SPECIFICATION	24

〈Chapter 3. Menu configuration and operating 〉

3.1 PTZ CONTROL	27
3.1.1 PRESET	27
3.1.2 MOTION DETECTION	29
3.1.3 AUTO SCAN	31
3.1.4 SEQ SCAN	33
3.1.5 RANDOM SCAN	34
3.1.6 PATTERN SCAN	35
3.1.7 TIME SCHEDULE	36

3.2 TIME SET	38
3.2.1 TIME SET SETTING	38
3.3 PRIVACY ZONE	39
3.3.1 PRIVACY MASK SETTING	39
3.4 ALARM IN	41
3.4.1 ALARM IN SETTING	41
3.5 ALARM OUT	42
3.6 SETUP	43
3.6.1 CAMERA SETUP	43
3.6.2 PAN/TILT SETUP	47
3.6.3 DISPLAY SETUP	49
3.6.4 AUTO PARKING	51
3.7 SYSTEM	52
3.7.1 REBOOT SYSTEM	52
3.7.2 RESET	52
3.7.3 PASSWORD SET	53
3.7.4 SYSTEM INFORMATION	54

Chapter 1.

Warning and Cautions

1.1 FEATURES	6
1.2 WARNING AND CAUTIONS	7
1.3 WARNING	8
1.4 CAUTIONS	9

1.1 FEATURES

1) High Speed

- This is the high speed dome camera which has wide speed range (Min. 0.05deg/sec ~ Max. 400deg/sec)
- Speed is controlled by user's option or the zoom magnification.

2) Preset & Motion Detection

- A maximum of 128 preset positions and 8 tour functions can be set. It also supports motion detection function.

3) Pattern

- This camera supports a maximum of 4 patterns which operate for 1 minute ~ 2 hours according to their complexity.

4) Time set & Schedule

- Inside the camera adopted RTC function and battery, it can be save & display current time.
- Schedule enables you to schedule a sequencing action by day and time.
- A maximum of 8 schedule can be set.

5) Privacy Zone

- Area masking can be set up for up to 8 points. For privacy, this camera provides a function for hiding the points for which area masking is selected from screen.

6) Alarm input/Alarm output

- Sensor can connect to alarm input to detect motion from outside.
- Alarm output supports "relay out" and "Open collector output".

7) Digital Auto Flip

- For monitoring an object moving below a camera , by running Auto Flip, moving objects can be monitored without screen reverse.

8) RS-485/422

- The function of the camera can be controlled by RS-485/422.

9) Mounting bracket for easy installation

- It is easy to install the camera by using the mounting bracket provided as accessories.

1.2 WARNING AND CAUTIONS

Please carefully check these particulars for the safe use.

1.2.1 EXAMPLES OF SIGN



WARNING

This symbol indicates the cause of death or serious injury to the user.



CAUTION

This symbol indicates the cause of equipment damage.

1.2.2 EXAMPLES OF SIGN



This symbol indicates the warning of electric shock.



This symbol indicates the prohibition of disassembly.



This symbol indicates to observe plug off.

1.3 WARNING



WARNING

Install the product on firm and durable position.



Use a recommended adaptor by the manual.



Unplug the unit when there is any sign of electric leakage, short circuit or smog by burn.



Do not disassemble or remodel the product.



Please check the external terminal before connecting the signal cables



1.4 CAUTION



Caution

This product should be installed by expert installer.



Do not install the product at the position exposed to the direct sun.



Do not install the product where lighting is unstable.



Do not drop, hit strongly nor vibrate the product.



Please use the product at the proper environment as follow.

- Temperature : 0°C ~ 50°C(32°F ~ 122°F)
- Humidity : below 90%



This product is produced only for the power as follow.

*Be sure to connect power after all installation are completed.

- Current consumption : 24V AC $\pm 10\%$, Max 1.5A
- Power Consumption : 18W



Unplug it when any inflammable or conductive material goes into the product.



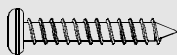
Chapter 2.

Overview and How to install

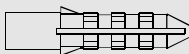
2.1 ACCESSORIES	11
2.2 OVERVIEW 1	12
2.3 OVERVIEW 2	17
2.4 HOW TO INSTALL	19
2.5 SPECIFICATION	24

2.1 ACCESSORIES

FIXING SCREW : SCREW 4x25 Tp1 BIND BK, 3EA



ANCHOR : 6x30, 3EA

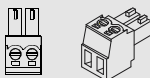


CORE

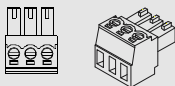


TERMINAL BLOCK

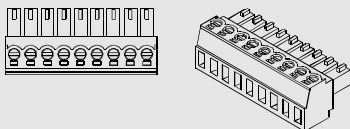
TERMINAL 15EDGR-3.81 – 2P, FEMALE



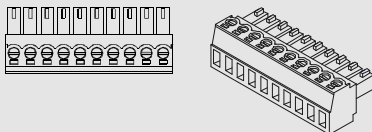
TERMINAL 15EDGR-3.81 – 3P, FEMALE



TERMINAL 15EDGR-3.81 – 9P, FEMALE



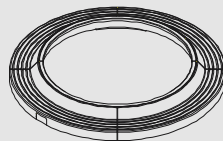
TERMINAL 15EDGR-3.81 – 10P, FEMALE



MOUNT BRACKET



ACCESSORY RING

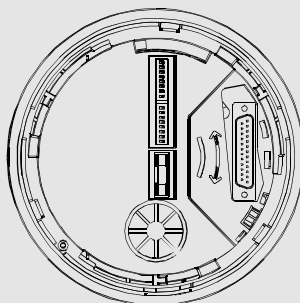
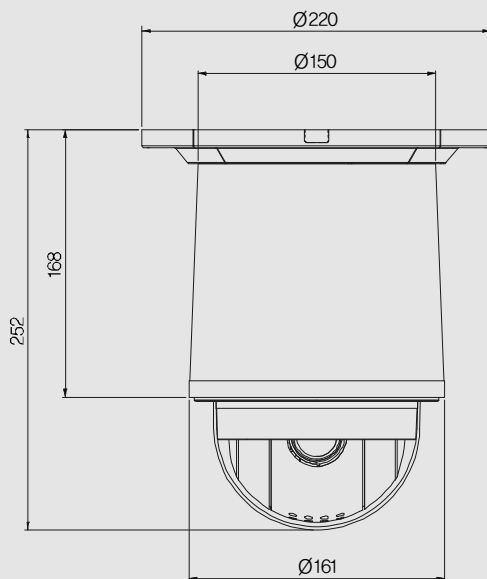


USER MANUAL

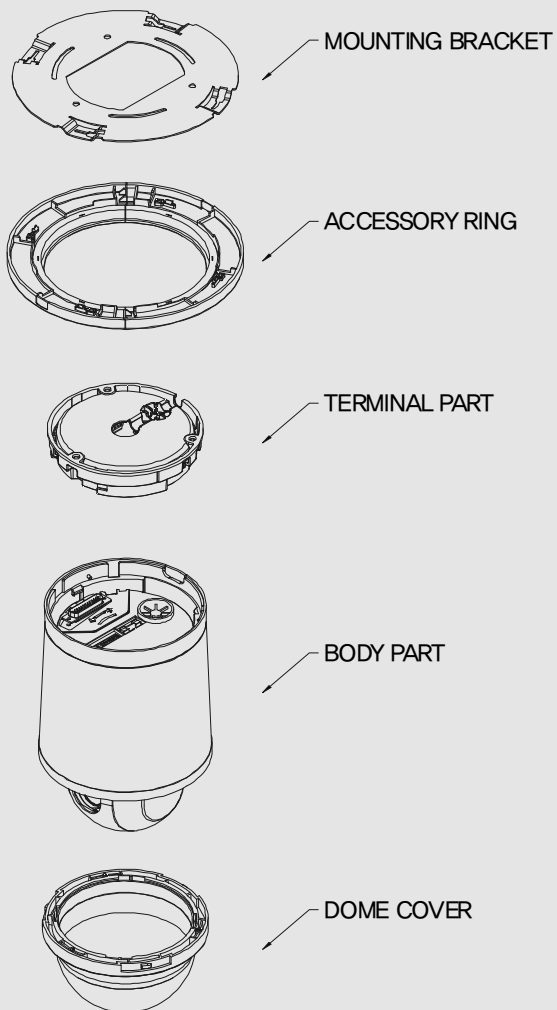


2.2 OVERVIEW 1

2.2.1 Dimension



2.2.2 Designation



2.2.3 Camera configuration

① ADDRESS switch

- It is to set camera ID to connect multiple cameras.
- Max. 255 of camera IDs(as binary notation) are available.
- Camera ID setting is as described on <Table. 5>.

② PROTOCOL switch

- Protocol can be set manually or automatically.
- Upon selecting "Protocol Auto Detection" function, protocol will be selected automatically.
- PROTOCOL setting is as described on <Table.1>.

③ BAUDRATE switch

- Select baud rate.
- Baud rate setting is as described on <Table 2>.

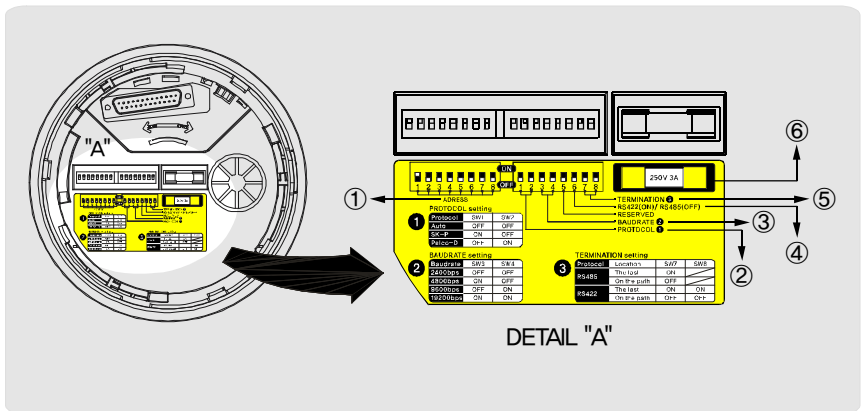
④ RS-422/RS-485 switch

- RS-422 or RS-485 is selectable for remote control between camera and controller.
- RS-422/RS-485 switch setting is as described on <Table 3>.

⑤ TERMINATION switch : Used for RS-485/RS-422 connection

- ON : Set on the last camera for 1:1 or multi communication between Camera and PC or a controller.
- OFF : Set on all cameras except for the last camera for multi-communication.
- TERMINATION setting is as described on <Table 4>.

⑥ SAFETY FUSE : It prevents overflow of electricity for safety.(250V, 3A)



[Pic 1] DIP SWITCH

Protocol	SW1	SW2
Auto	OFF	OFF
SK-P	ON	OFF
Pelco-D	OFF	ON

[Table 1] PROTOCOL SETTING

Baudrate	SW3	SW4
2400 bps	OFF	OFF
4800 bps	ON	OFF
9600 bps	OFF	ON
19200 bps	ON	ON

[Table 2] BAUDRATE SWITCH

Communication	SW6
RS-485	OFF
RS-422	ON

[Table 3] RS485 / 422 SETTING

Termination	SW7	SW8
ON	ON	OFF
OFF	ON	ON

[Table 4] TERMINATION SETTING

Camera ID	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8
1	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
4	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
5	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
6	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
7	ON	ON	ON	OFF	OFF	OFF	OFF	OFF
8	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
9	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF

10	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF
11	ON	ON	OFF	ON	OFF	OFF	OFF	OFF
12	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF
13	ON	OFF	ON	ON	OFF	OFF	OFF	OFF
14	OFF	ON	ON	ON	OFF	OFF	OFF	OFF
15	ON	ON	ON	ON	OFF	OFF	OFF	OFF
16	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF
17	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF
18	OFF	ON	OFF	OFF	ON	OFF	OFF	OFF
19	ON	ON	OFF	OFF	ON	OFF	OFF	OFF
20	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF
21	ON	OFF	ON	OFF	ON	OFF	OFF	OFF
22	OFF	ON	ON	OFF	ON	OFF	OFF	OFF
23	ON	ON	ON	OFF	ON	OFF	OFF	OFF
24	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF
25	ON	OFF	OFF	ON	ON	OFF	OFF	OFF
26	OFF	ON	OFF	ON	ON	OFF	OFF	OFF
27	ON	ON	OFF	ON	ON	OFF	OFF	OFF
28	OFF	OFF	ON	ON	ON	OFF	OFF	OFF
29	ON	OFF	ON	ON	ON	OFF	OFF	OFF
30	OFF	ON	ON	ON	ON	OFF	OFF	OFF
31	ON	ON	ON	ON	ON	OFF	OFF	OFF
32	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF
33	ON	OFF	OFF	OFF	OFF	ON	OFF	OFF
34	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF
35	ON	ON	OFF	OFF	OFF	ON	OFF	OFF
36	OFF	OFF	ON	OFF	OFF	ON	OFF	OFF
37	ON	OFF	ON	OFF	OFF	ON	OFF	OFF
38	OFF	ON	ON	OFF	OFF	ON	OFF	OFF
39	ON	ON	ON	OFF	OFF	ON	OFF	OFF
40	OFF	OFF	OFF	ON	OFF	ON	OFF	OFF
41	ON	OFF	OFF	ON	OFF	ON	OFF	OFF
42	OFF	ON	OFF	ON	OFF	ON	OFF	OFF
43	ON	ON	OFF	ON	OFF	ON	OFF	OFF
44	OFF	OFF	ON	ON	OFF	ON	OFF	OFF

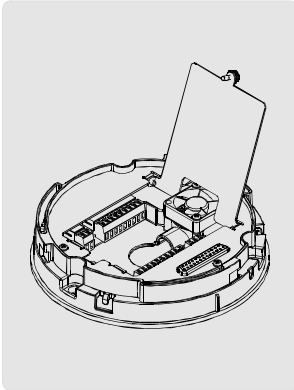
⋮

The rest is omitted.

[Table 5] CAMERA ID SETTING

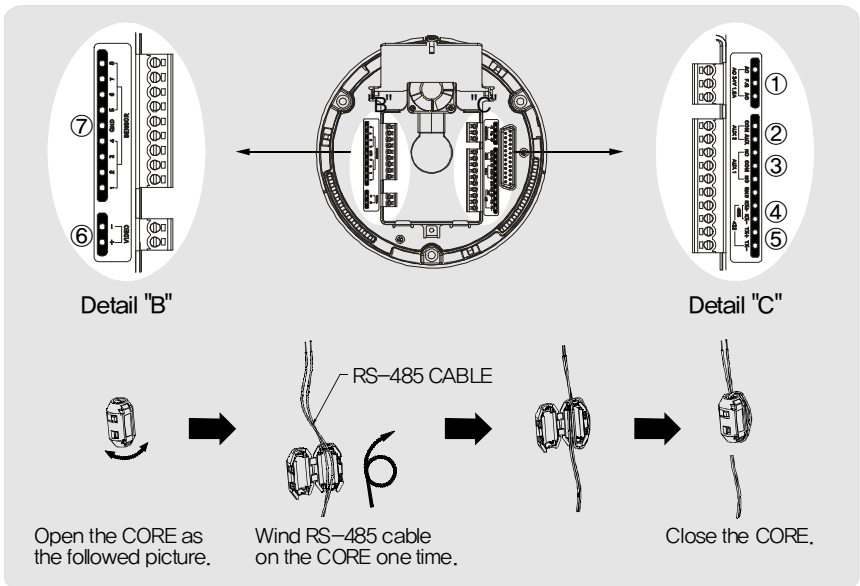
2.3 OVERVIEW 2

2.3.1 Terminal configuration

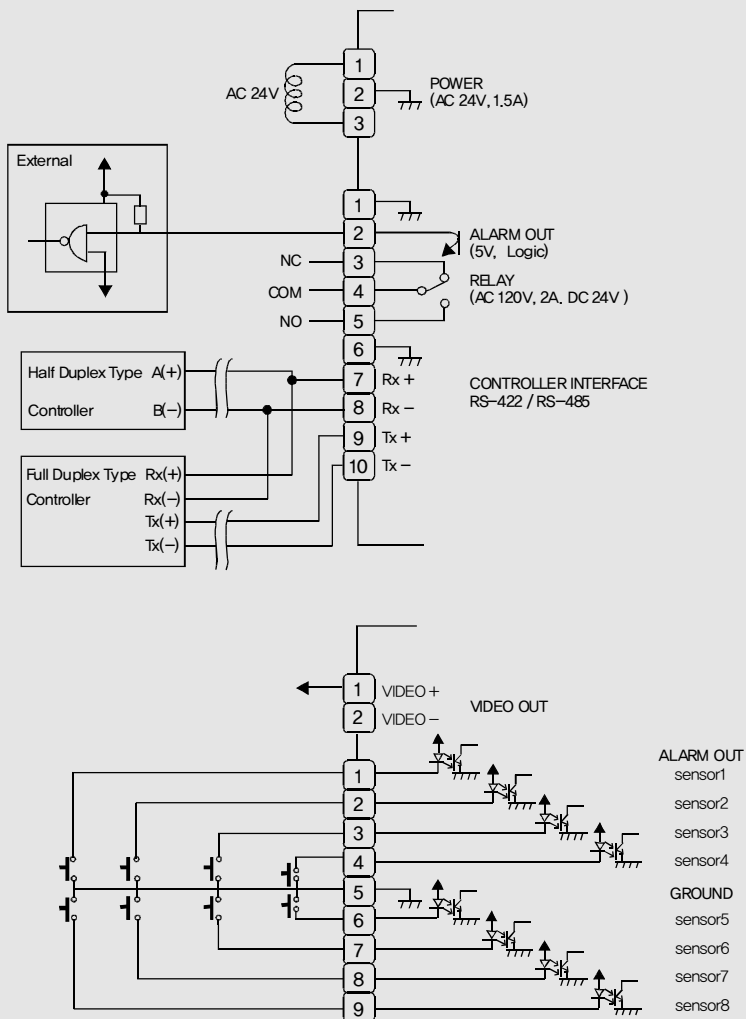


[Pic 2] TERMINAL PART

- ①POWER TERMINAL : Use AC24V $\pm 10\%$, Max 1.5A
- ②AUX2 : ALARM OUTPUT(OPEN COLLECTOR)
- ③AUX1 : ALARM OUTPUT(RELAY)
- ④RX+/RX- :
 - Terminal for receiving the data on RS-422 communication,
 - Terminal for data communication on RS-485.
- ⑤TX+/TX- : Terminal for transporting the data on RS-422 communication,
- ⑥VIDEO+/- : For video signal output,
- ⑦SENSOR 1/2/3/4/5/6/7/8 : For alarm input,



[Pic 3] TERMINAL BLOCK

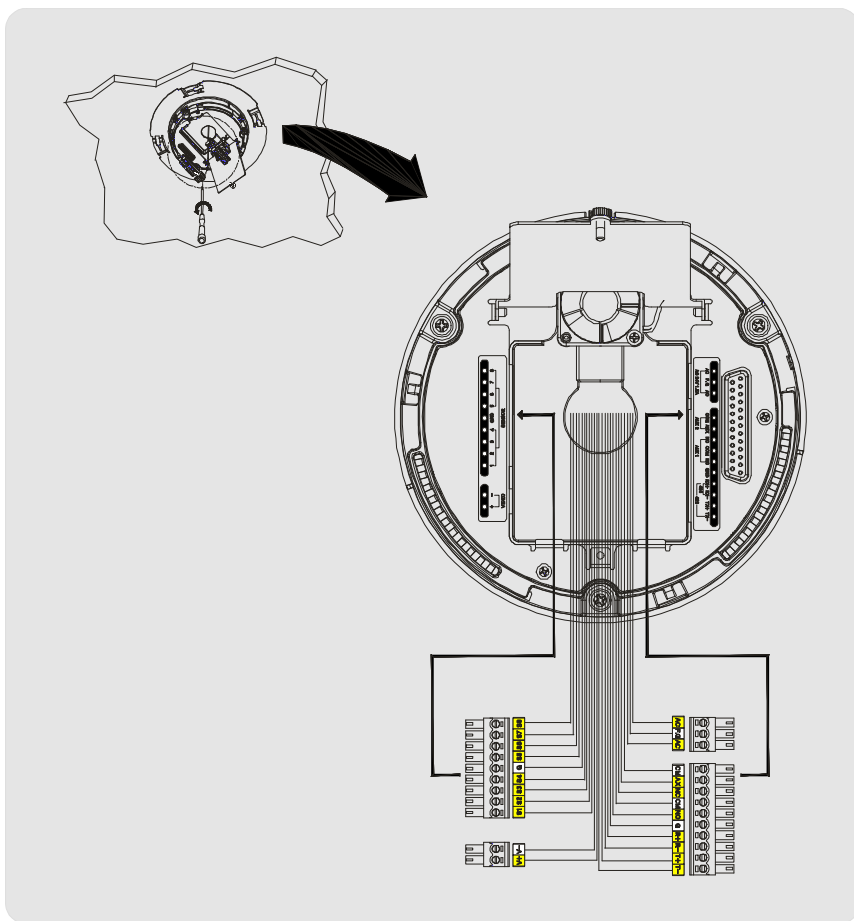


[Pic 4] TERMINAL BLOCK DIAGRAM

2.4 HOW TO INSTALL

2.4.1 Connecting the cable to terminal block.

Please refer to [Pic. 3&4] for the connection.



[Pic 5] INSTALLATION 1

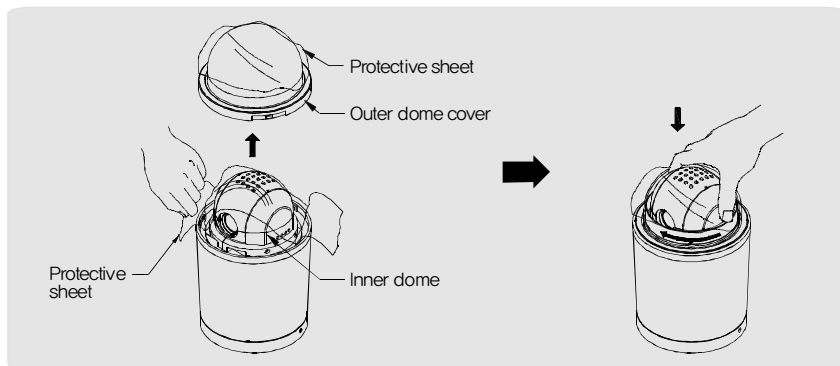
2.4.2 Switch setting

Please refer to [Table 1~5] for switch setting.

2.4.3 Camera installation

2.4.3.1 Remove the protective sheet from the inner dome.

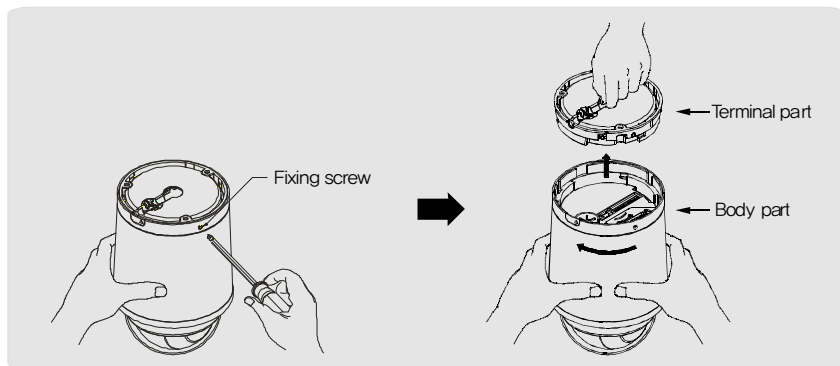
- 1) Pull out the outer dome cover.
 - 2) Remove the protective sheet from the inner dome.
 - 3) Twist the outer dome cover clockwise.
- ※ Remove the protective sheet of the outer dome cover before operating camera.



[Pic 6] FIXED DOME COVER

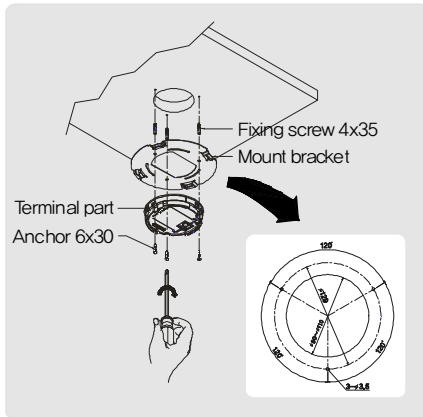
2.4.3.2 Separate terminal part from body part.

- 1) Loosen the fixing screw on the bottom of the body.
- 2) Turn the body part clockwise and pull the terminal part.



[Pic 7] SEPARATION

2.4.3.3 Mount the terminal part on the ceiling.

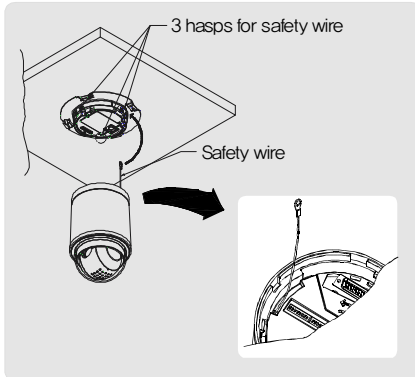


- 1) Make a hole of 90 ~ 110mm in diameter.
- 2) Using the mounting bracket as a template drill three holes in the ceiling to mount the bracket.
- 3) Fasten three screws to fix the terminal part on the ceiling.

〈Caution〉 Don't block the ventilation hole.
It may cause malfunction.

[Pic 8] USING SAFETY WIRE

2.4.3.4 Use the safety wire to prevent the camera from falling.



- 1) Pull the wire on the bottom of the body part.
- 2) Hook the wire over the terminal part as followed picture.

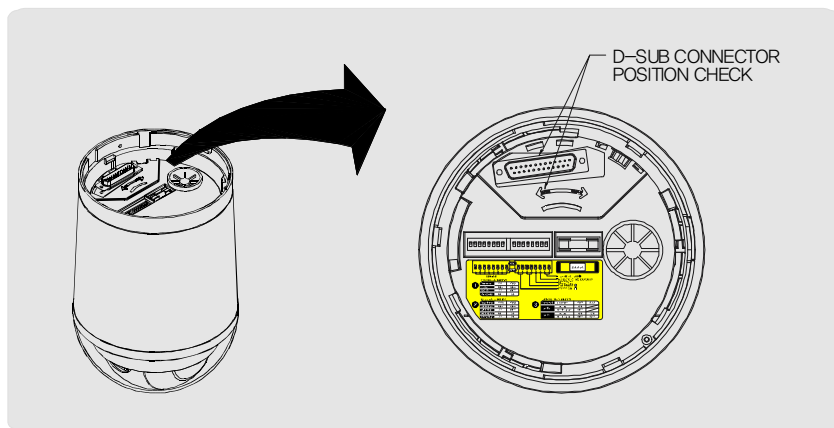
[Pic 9] INSTALLATION TERMINAL PART

2.4.3.5 Connect the terminal block

- 1) Open the cover of the terminal part to connect terminal block.
〈Caution〉 Be sure to connect power after all installation are completed.
- 2) Refer to terminal block diagram for connection.(Pic.6&7)
- 3) Close the cover of the terminal part and fasten the screw.

2.4.3.6 Address and Setup switch setting

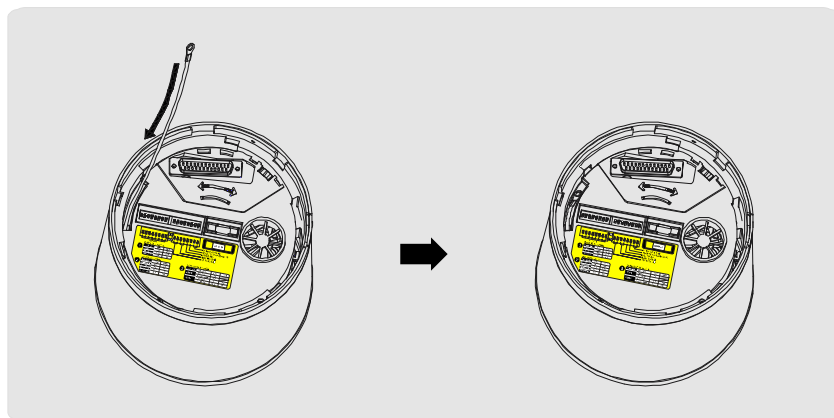
- 1) Set the switch on the bottom of the body part.
- 2) Refer to [Table 1~5] for switch setup.
- 3) Check if D-SUB Connector"Open".



[Pic 10] SWITCH SETUP

2.4.3.7 Restore the safety wire

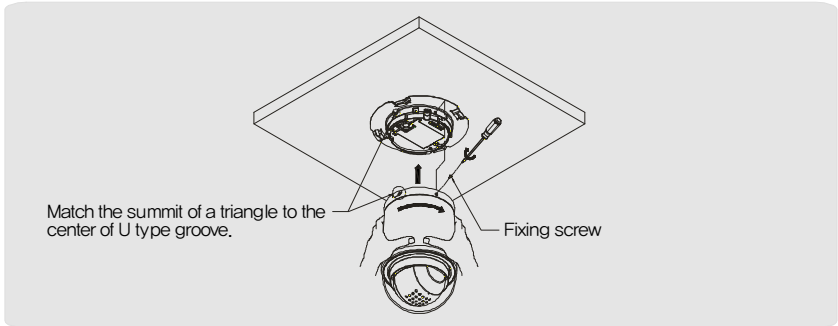
- 1) Restore the safety wire to the original position.(Push the wire to the wire hole.)



[Pic 11] SAFETY WIRE

2.4.3.8 Combine the terminal part and body part

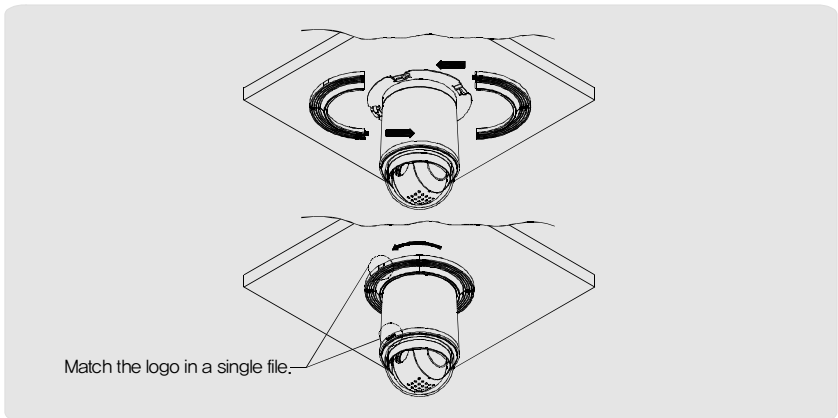
- 1) Place the summit of a triangle on the body part to the center of "U" groove on the terminal part.
- 2) Turn the body part clockwise.
- 3) Fasten the fixing screws on the body part.



[Pic 12] SWITCH SETUP

2.4.3.9 Combine the bottom ring

- 1) Combine two parts of the bottom ring at the bottom of the body part.
- 2) Place the square groove to logo of the body part as followed picture and turn the ring anticlockwise.



[Pic 13] COMBINE RING

2.5 SPECIFICATION

Item	Specification	
	Type 1	Type 2
Zoom	27X Optical, 16X Digital	37X Optical, 16X Digital
CCD	1/4" COLOR SONY SUPER HAD CCD	
TV Type	NTSC, PAL	
Effective Pixel	768(H) X 494(V) PIXEL(NTSC), 752(H) X 582(V) PIXEL(PAL)	
Resolution	Color : 600 TV-Line, B/W : 700 TV-Line	
Min. Illumination	Color : 0.2Lux/F1.6(50IRE), B/W : 0.02Lux/F1.6(50IRE)	
Focal Length	f = 3.5 ~ 95mm	f = 3.5 ~ 129.5mm
Day&Night	ICR(AUTO/COLOR/BW)	
Preset	128points	
Pattern	4patterns(210sec ~ 2 hours : depends on complexity)	
Privacy Zone	8zones	
Tour	8tours	
Auto Scan	CW/CCW/Custom mode	
Pan Angle	360deg(Endless)	
Tilt Angle	180deg(Auto Flip)	
Pan/Tilt Speed	0.05 ~ 120deg/sec(Manual), Max. 400deg/sec(Preset)	
Alarm Input	8	
Alarm Output	Open Collector(5V DC, 40mA) / Relay(30V DC, 2A / 125V AC, 0.5A)	
Address(ID)	255	
Remote Control	RS-485 or RS-422	
Protocol	AUTO, SK-P, PELCO-D	
Power	24V AC / 18W 1.5A	
Operation Temp.	0°C ~ 50°C	
Preservation Temp.	-20°C ~ 60°C	
Dimension	Ø150mm X 252mm	
Weight	Approx. 2.2Kg	
Bracket(option)	SK-AB04, AB05, AB06, AB07	

Chapter 3.

Menu configuration and operating

3.1 PTZ CONTROL	27
3.2 TIME SET	38
3.3 PRIVACY ZONE	39
3.4 ALARM IN	41
3.5 ALARM OUT	42
3.6 SETUP	43
3.7 SYSTEM	52

Not only basic function such as Pan/Tilt/Zoom but additional functions are available for this camera. Additional functions are as follow.

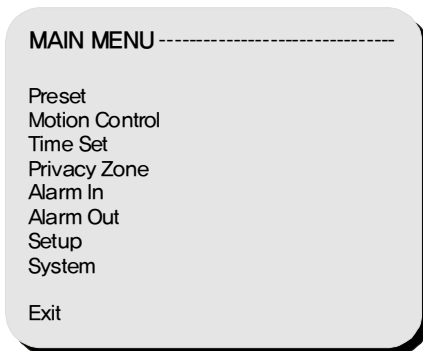
PRESET	Setting functions of speed dome such as Preset and Motion detection
MOTION CONTROL	Setting function of speed dome such as Sequence/Random Scan, Custom/CW/CCW Scan and Pattern/Schedule
TIME SET	Set current time
PRIVACY ZONE	Hide the points for which area masking is selected from the screen
ALARM IN	Set regarding sensor input
ALARM OUT	Set operation of the connected sensor
SETUP	Set up for camera, motor and display
SYSTEM	System setting such as Password, Reboot, Reset and System Information
SCHEDULE	Schedule enables you to schedule a sequencing by day and time.

These functions are set on OSD.

OSD menu setup by the specialty controller

- 1) MENU : Press "MENU" button to go to the menu(P/T/Z function would be stopped.)
- 2) IRIS OPEN : Move to the sub menu or select the menu.
- 3) IRIS CLOSE : Move to the above menu or move the cursor to "EXIT"
- 4) Joystick
 - Right: Move the cursor to the right or the sub menu.
 - Left: Move the cursor to the left or the previous menu.
 - UP: Move the cursor to the above or increase the value.
 - Down: Move the cursor to the below or decrease the value.

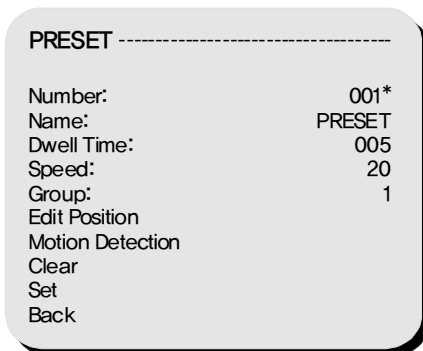
This is first page of the OSD menu.



3.1 PTZ CONTROL

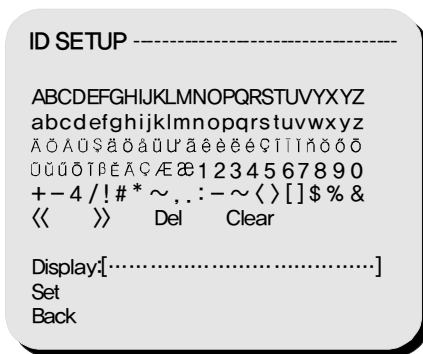
3.1.1 PRESET(Path : MAIN MENU / PRESET)

This function is to save, delete, or call the specific position of Pan, Tilt, Zoom or Focus by user's option.

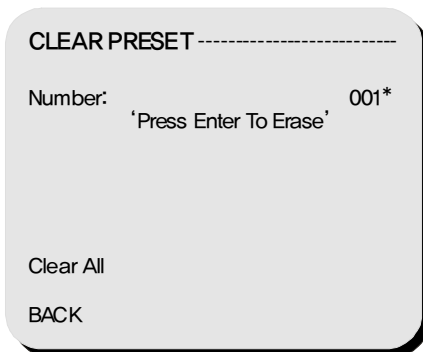


3.1.1.1 SAVE PRESET POSITION

- 1) **Number** : Change the number on "NUMBER".(If you already set the number, the camera would move to the saved position.)
- 2) **Name** : Press "IRIS OPEN" or "MENU" button of the controller to set the name of preset.
- 3) **Dwell Time** : Set staying time in each position for preset.(Default : 5sec, The range is 1~250.)



- 4) **Speed** : Set the moving speed to preset position.(The range of speed is 1~20)
- 5) **Group** : Set the group number of SEQ SCAN function.
- 6) **Edit Position** : To change PTZ of the preset position.
- 7) **Motion & Detection** : Motion detection is compatible with preset.(Please refer to 3.1.2 "MOTION DETECTION")
- 8) **Clear** : This is to delete one or all preset position.



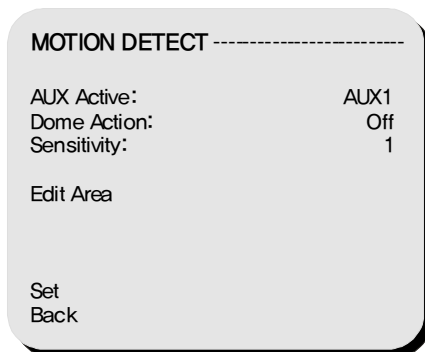
- 9) Set : Save current value. If you don't run "set", the value will not save. After saving is completed, The "*" appeared beside number.

3.1.1.2 CALL THE PRESET POSITION

- 1) Input the preset number you want to move on "NUMBER".
 - 2) In case " * " appears at the right of the number, press "IRIS CLOSE" button.
- [TIP] With special controller(option), you can use "PRESET" function easily.

3.1.2 MOTION DETECTION(Path : MAIN MENU / PRESET / MOTION DETECTION)

This is the sub menu for preset. You can set eight specific zones on the screen and upon detection of motion on the zones, the camera would operate as what you set.



3.1.2.1 MOTION DETECTION SETTING

1) AUX Active :

- Off : No action.
- AUX1 : Relay upon detection of motion.
- AUX2 : Activate output of "Open collector".

2) Dome Action :

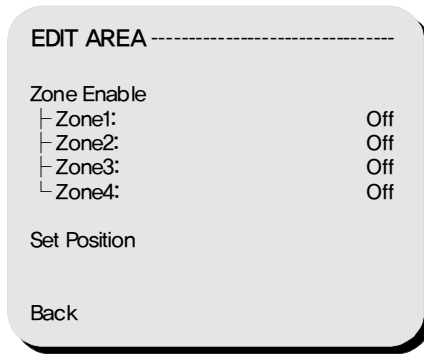
- Off : No action.
- PTRN1 ~ PTRN4 : The camera move as PTRN1~PTRN4 upon detection of motion.
- CW : Scan clockwise automatically upon detection of motion.
- CCW : Scan counterclockwise automatically upon detection of motion.
- CUSTOM : Patrol the area set by the user on "Custom set".

3) Sensitivity : Set the sensitivity of detecting motion. Higher number means higher sensitivity.

Please set the proper sensitivity to prevent from operating abnormally.

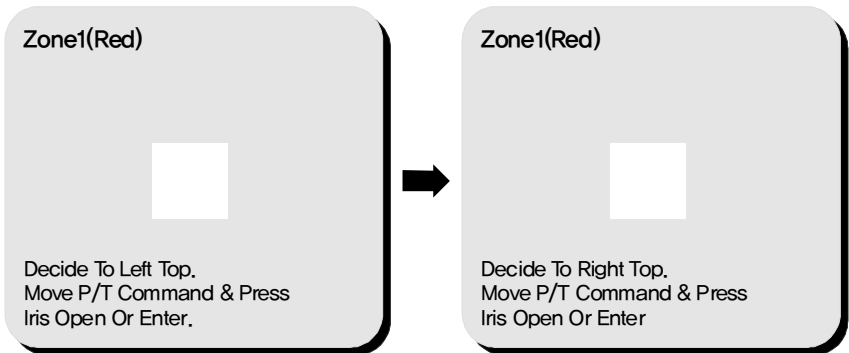
High sensitivity may cause malfunction of the camera.

4) Edit Area : You can set the maximum of 4 zones as follow.



3.1.2.2 MOTION DETECTION AREA SETTING

- 1) Zone Enable : Select 4 Motion Detection Zones On/Off
- 2) Set Position : Set the position and size the selected zone.



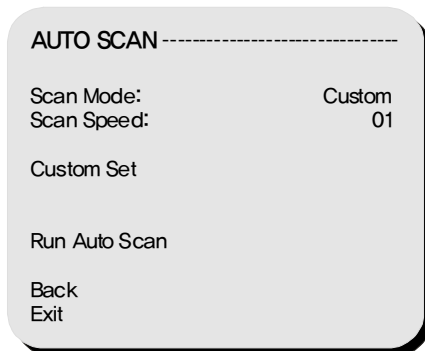
- : ① Move to where you want place as shown on the picture. After that press the IRIS OPEN or MENU key to move next step.
- ② Set the size of zone as shown on the right picture. After that press the IRIS OPEN or MENU key.

3.1.3. AUTO SCAN(Path : MAIN MENU / MOTION CONTROL / AUTO SCAN)

This function is to make the camera panning automatically at the fixed speed.

"TILT" or "ZOOM" function can be set by user's option on AUTO SCAN mode.

〈Notice〉 Move joystick to the right or the left to stop AUTO SCAN mode but after few seconds the auto scan action again. If you want to stop this function, send "STOP" command by the controller.



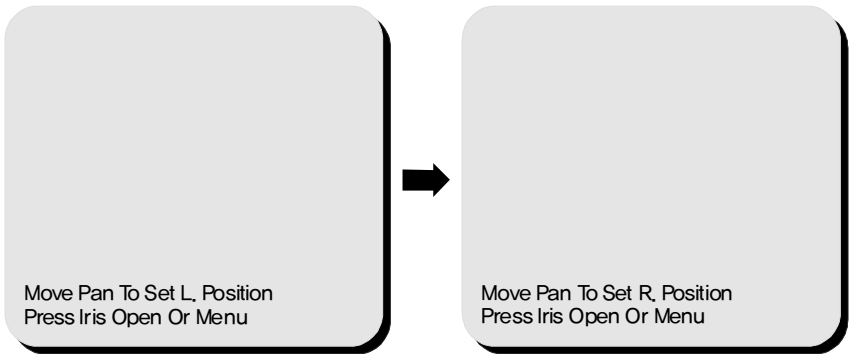
3.1.3.1 AUTO SCAN SETTING

1) Scan Mode :

- CW : Clockwise Auto scan
- CCW : Counterclockwise Auto scan.
- Custom : Patrol the area set by the user on "CUSTOM SET"

2) Scan Speed : Max, 20 levels are selectable. Higher number means higher speed. Default value is "5"

3) Custom Set : Limits the range of movement in the PAN direction. Determine the left/ right end position using the joystick and press "IRIS OPEN" or "MENU" key to complete custom set.

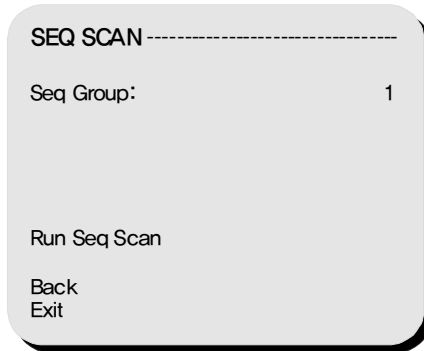


4) Run Auto Scan : Start the Auto scan by user setting mode.

〈Notice〉 Move the joystick to stop the auto scan, after few seconds the auto scan again.
Send the command of Auto Scan Stop or menu key to move out the Auto scan.

3.1.4 SEQ SCAN(Path : MAIN MENU / MOTION CONTROL / SEQ SCAN)

This function is to move the camera to the memorized positions one by one.



3.1.4.1 SEQ SCAN SETTING

1) **Seq Group** : The camera moves to the memorized positions one by one according to the group. Please refer to [3.1.1 PRESET] to set group. Max. 8 groups are available.

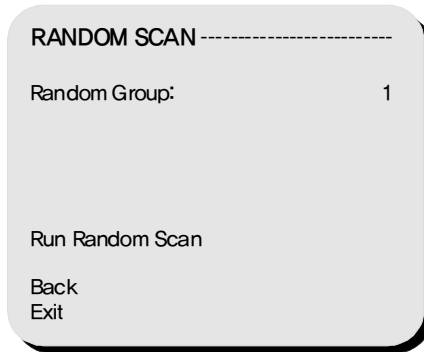
2) **Run Seq Scan** : Run SEQ SCAN by user set group.

〈Notice〉 Move the joystick to stop the seq scan, after few seconds the seq scan again.

Send the command of Sequential Scan Stop or menu key to move out the Sequential scan.

3.1.5 RANDOM SCAN(Path : MAIN MENU / MOTION CONTROL / RANDOM SCAN)

This function is to move the camera to the memorized positions randomly.



3.1.5.1 RANDOM SCAN SETTING

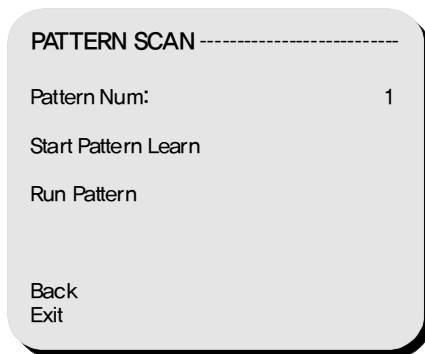
- 1) **Random Group** : Register up to 8 groups. The camera move s to the memorized positions randomly according to the group. Please refer to "4.1 PRESETS" to set group.
 - 2) **Run Random Scan** : Run random scan user set group
- 〈Notice〉 Move the joystick to stop the auto scan, after few seconds the auto scan again.
Send the command of Random Scan Stop or menu key to move out the Random scan.

3.1.6 PATTERN SCAN(Path : MAIN MENU / MOTION CONTROL / PATTERN SCAN)

This function is to memorize the position by panning, tilting, or zooming for a while and move the camera to the memorized positions. Save up to 4 patterns.

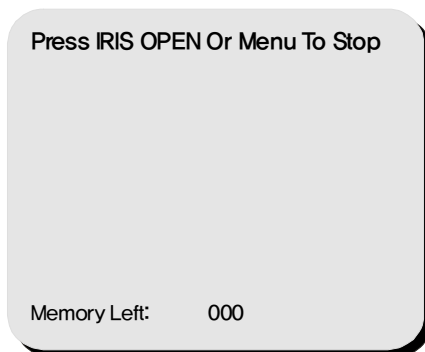
"PATTERN SCAN" repeats until user moves joystick or press "STOP" on the controller.

〈Notice〉 Pattern Scan Setting / Playback, AUTO FLIP feature is automatically disabled.



3.1.6.1 PATTERN SCAN SETTING

- 1) Pattern Num : Set pattern number.(1~4) Default value is 1.
- 2) Start Pattern Learn : Start Pattern Learn : To move P/T/Z to memorize pattern.



: Memory Left – Display the available number of memory.

- 3) Run Pattern : Run pattern.

〈Notice〉 Move the joystick to stop the pattern scan, after few seconds the pattern scan again.
Send the command of pattern Stop or menu key to move out the pattern scan.

3.1.7 TIME SCHEDULE(Path : MAIN MENU / MOTION CONTROL / TIME SCHEDULE)

Schedule enables you to schedule a sequencing by day and time. Up to 8 timeline can be selected for a day.

TIME SCHEDULE -----

Number:	1
Enable:	Off
Start Time:	00:00
End Time:	00:00
Time Act:	SEQ1

Set
Back
Exit

3.1.7.1 TIME SCHEDULE SETTING

- 1) **Number** : Select number of schedule. Up to 8 timeline can be selected for a day.
Default value is 1.
- 2) **Enable** : Determine whether to use this function or not.
- 3) **Start Time** : Set start time. Press the IRIS OPEN or MENU key to select hour and then press again the IRIS OPEN or MENU key to select minute. After that you should press the 'IRIS CLOSE' key to escape this menu.
- 4) **End Time** : Set end time.
- 5) **Time Act** : Select the sequencing action to schedule the action.
 - OFF : No action.
 - PTRN 1~4 : The camera move as PTRN1~PTRN4.
 - SEQ 1~8 : The camera move as SEQ1~SEQ8.
 - CW : Scan clockwise automatically.
 - CCW : Scan counterclockwise automatically.
 - Custom : The camera working Auto Scan mode by custom mode.
- 6) **Set** : Set : Save the value and then move out this menu.

TIME TABLE -----

No	Ena	Act	Start	End
1.	On	Custom	13:30 ~	14:55
2.	Off	SEQ3	00:00 ~	00:00
3.	Off	SEQ3	00:00 ~	00:00
4.	Off	SEQ3	00:00 ~	00:00
5.	Off	SEQ3	00:00 ~	00:00
6.	Off	SEQ3	00:00 ~	00:00
7.	Off	SEQ3	00:00 ~	00:00
8.	Off	SEQ3	00:00 ~	00:00

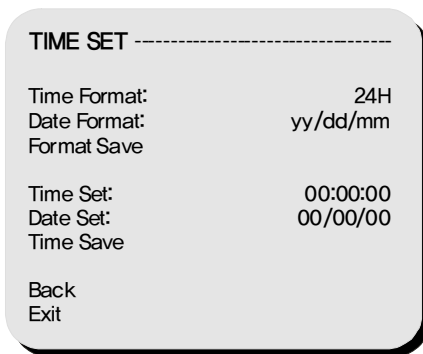
Press Menu To Exit

: When turning ON this menu, the timetable appears as shown on the picture.

3.2 TIME SET(Path : MAIN MENU / TIME SET)

Customize the camera clock; you can schedule sequence actions to perform automatically.

〈Notice〉 If the time error occurs, you should replace the battery in the camera.



3.2.1 TIME SET SETTING

- 1) Time Format : Change the display format of the camera time 24H or 12H.

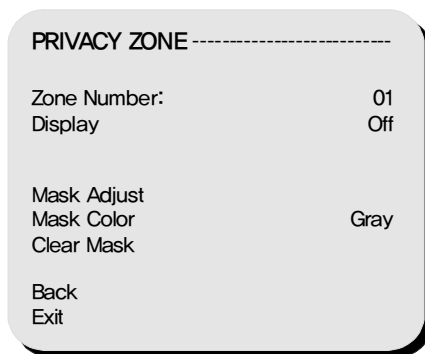
〈Notice〉 Time set 12hours/24hours will be affected only on a screen. The function of "Time set" and "Time schedule" you must set 24 hours standard.

- 2) Date Format : Change the display format of the camera date,(DD/MM/YYYY or MM/DD/YYYY)
- 3) Format Save : Save the display format of the camera date and time.
- 4) Time Set : Enter a time.
- 5) Date Set : Enter a date.
- 6) Time Save : Save current value.

3.3 PRIVACY ZONE(Path : MAIN MENU / PRIVACY ZONE)

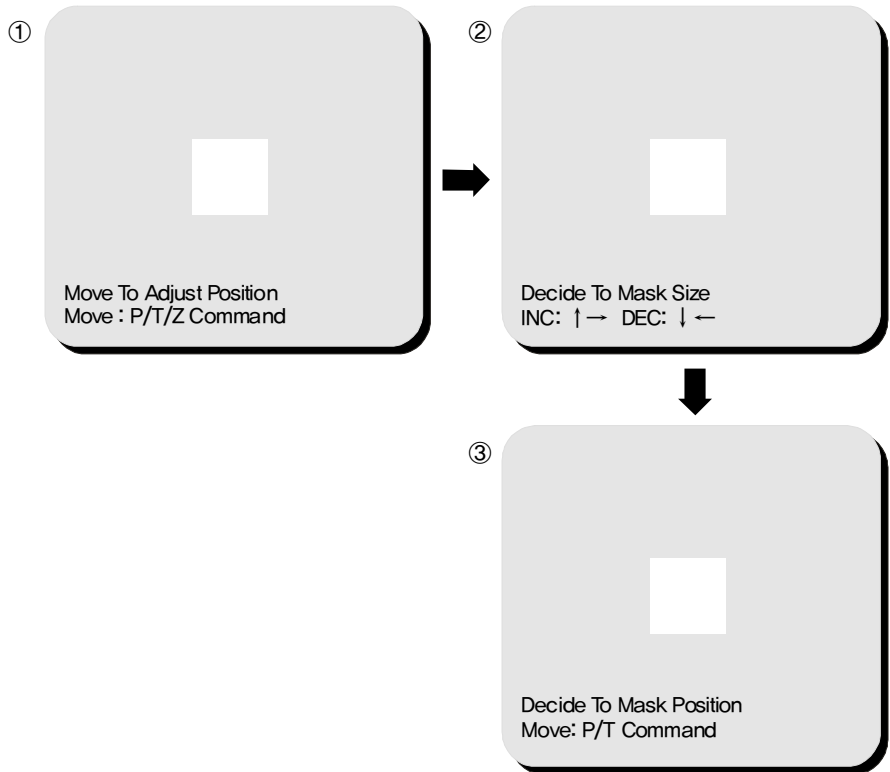
For privacy, this camera provides a function for hiding the points for which area masking is selected from screen. Area masking can be set up for up to 16 points. Setting up more than 5 points may cause masks to move slow.

〈Notice〉 In case of saving zones with auto-flip condition, auto-flip will be released.



3.3.1 PRIVACY MASK SETTING

- 1) **Zone Number** : Up to 16 points.
- 2) **Display** : To determine whether to be privacy zone visible.
- 3) **Mask Adjust** : Set the position and size the selected privacy zone.
 - ① Please move to where you want place as shown on the ① picture. After that press the IRIS OPEN or MENU key to move next step.
 - ② Set the size of privacy zone as shown on the ② picture. After that press the IRIS OPEN or MENU key to move next step.
 - ③ Set the position of privacy zone as shown on the ③ picture. After that press the IRIS OPEN or MENU key to finish this function.
- 4) **Mask Color** : To change the color of Privacy zone, 5 color are selectable.(Gray/Blue/Red/Black/White)
- 5) **Clear Mask** : Delete the set mask.



3.4 ALARM IN(Path : MAIN MENU / ALARM IN)

This function is to activate alarm upon detection of sensor..

ALARM IN -----

Sensor Num:	1
Priority:	1
Input Contact:	Off
Activate	
└ AUX:	Off
└ Preset:	Off
└ Dome Act:	Off
Set	
Back	
Exit	

3.4.1 ALARM IN SETTING

- 1) **Sensor Num** : Set the alarm numbers up to 8 numbers. Please refer to Pic.3 Terminal configuration for alarm input.
- 2) **Priority** : Set the priority of 8 alarm inputs and react to the alarm input in accordance with the priority.
Lower number means higher priority. Operation by the alarm with higher priority takes precedence over the alarm with lower priority. In case of the alarms with the same priority, the camera would be operated by the alarm in turns. On operating by the alarm with higher priority, the alarm with lower priority would be ignored.
- 3) **Input Contact** : Set according to the connected sensor.
 - Off : "No sensor" connected
 - N.O : "Normally Open"
 - N.C : "Normally Closed"

〈Notice〉 In case there is no sensor connected, please set "OFF", otherwise it might cause malfunction.
- 4) **Activate** : Set "On" to activate "ALARM", "PRESET" or "DOME ACTION". Operation by "PRESET" would be just one time, and after that, operation by "DOME ACTION" would repeat.
 - **AUX** : Enables selecting an alarm output method.(Off/1/2) Off is not support alarm output. 1 is Relay. 2 is Open collector.
 - **Preset** : Enables setting up a Preset action.
 - **Dome Action** : Enables setting up a Dome action.

3.5 ALARM OUT(Path : MAIN MENU / ALARM OUT)

To set the output against the alarm input.

The screenshot shows a menu titled "ALARM OUT" with a dashed line separator. Below the title, there are two sections for "AUX1 Set" and "AUX2 Set". Each section has two sub-items: "Mode:" and "Dwell Time:". The "Mode:" values are "Off" for both, and the "Dwell Time:" values are "05" for both. At the bottom of the menu, there are three options: "Set", "Back", and "Exit".

ALARM OUT	
AUX1 Set	
Mode:	Off
Dwell Time:	05
AUX2 Set	
Mode:	Off
Dwell Time:	05
Set	
Back	
Exit	

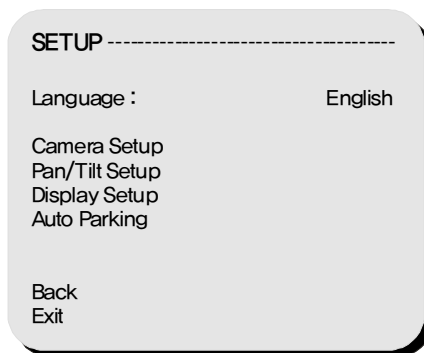
1) Mode :

- Off : No action.
- P_Act : Output until canceling the alarm regardless dwell time.(Permanent activation)
- M_Act : Output for dwell time.(Momentary activation)

2) Dwell Time : Set dwell time from 1 to 60 sec

3.6 SETUP(Path : MAIN MENU / SETUP)

This is setup for camera function such as display, Pan/Tilt and etc.

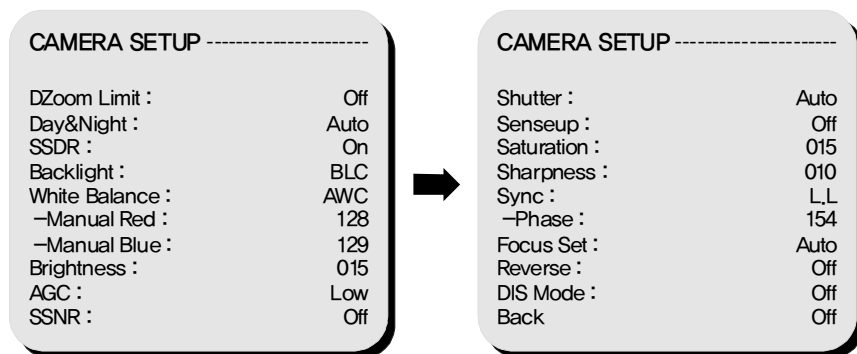


: The camera supports multi-language..

〈Notice〉 The language might be different according to the F/W.

3.6.1 CAMERA SETUP(Path : MAIN MENU / SETUP / Camera Setup)

Set the camera's option.



: The page of menu is separated as 2 pages. You can move to next page on the end of first page.

- 1) DZoom Limit : Enables the maximum digital zoom.(Off ~ 16X)
- 2) Day&Night : The Day & Night function allows the camera to switch between the Color and B/W modes.

- **Auto** : The picture switches automatically color to B/W as the light level changes.
 - **Night** : The picture switches to B/W.
 - **Color** : The picture switches to color.
- 3) **SSDR** : SSDR illuminates darker spots of an image while retaining the same light level for brighter spots to even out the overall brightness of the image with high contrast between bright and dark spots.(On/Off : Enables or disables SSDR.)
- **Range** : Defines a range of SSDR.(Narrow / Wide)
 - **Level** : Changes the contrast between bright and dark spots by the level.(00~15)

SSDR SETUP -----

Range :	Wide
Level :	15

Save&Back
Back

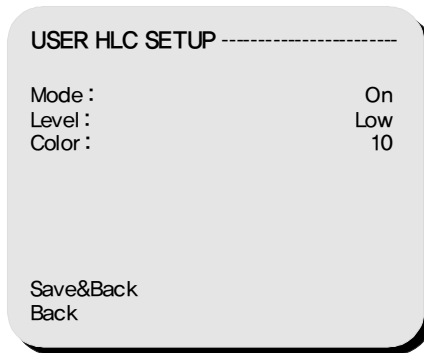
- 4) **Backlight** : This camera is designed to deliver a distinctive subject and background at the same time, even when the subject is backlight.
- **Off** : Disables this function
 - **BLC** : Enables a user to directly select a desired area from a picture, and to view the area more clearly.

USER BLC SETUP -----

Mode :	On
Level :	Low
Top :	025
Bottom :	025
Left :	025
Right :	025

Save&Back
Back

- **Mode** : Activate / Deactivate BLC
- **Level** : Adjust the level
- **Top** : Determines the upper end of BLC area is to be used.(000 ~ 100)
- **Bottom** : Determines the lower end of BLC area is to be used.(000 ~ 100)
- **Left** : Determines the left end of BLC area is to be used.(000 ~ 100)
- **Right** : Determines the right end of BLC area is to be used.(000 ~ 100)
- **HLC** : If the scene contains extremely bright light areas such as; from car headlight, the light can mask out much of the on-screen detail.



- **Mode** : Enables or disables HLC.
 - **Level** : Adjust level of the HLC function.(LOW / MIDDLE / HIGH)
 - **Color** : Change the color of highlight mask.(00 ~ 15)
- 5) **White Balance** : The White Balance menu adjusts the balance of the screen colors under different lighting conditions.
- **ATW/IN** : Adjusts the screen color to be optimal in an indoor environment.
 - **ATW/OUT** : Adjusts the screen color to be optimal in an outdoor environment.
 - **AWC** : To obtain the optimal condition for the current lighting, put the focus of the camera to a white paper and press the SET button. If the lighting environment is changed, you should readjust the settings accordingly.
 - **MANUAL** : Select this to fine-tune White Balance manually. Enables customization the Red and Blue gains.
- 6) **Brightness** : Adjusts the screen brightness.(0 ~ 100)
- 7) **AGC** : AGC(Automatic Gain Control) adjusts the camera's gain control and the screen brightness if the camera has captured an object under low-light conditions. (Low / Medium / High / Manual)
- If user choose the 'Manual' mode, user can adjust gain value(00 ~ 36)

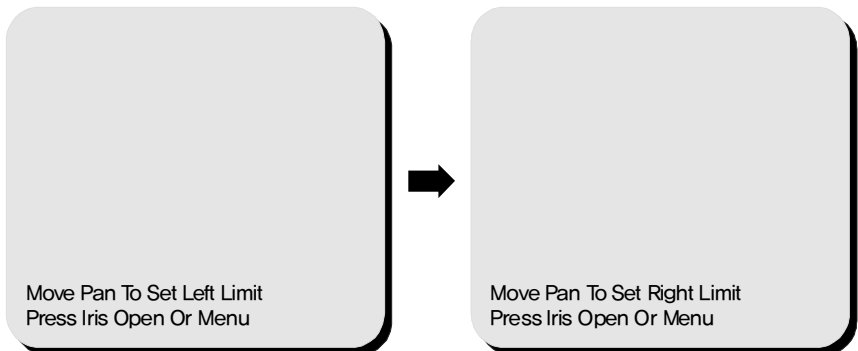
- 8) **SSNR** : SSNR significantly reduces the amount of low luminance noise.(Off / Low / Middle / High)
- 9) **Shutter** : Control image brightness by adjusting shutter speed.
 - **ESC** : Automatic shutter speed setting.(optimal)
 - **Anti_FLK** : Flicker-free mode.(NTSC : 1/100, PAL : 1/120)
 - **MANUAL** : Manual shutter speed setting.(1/60 ~ 512X)
- 10) **Sense Up** : Automatically detects light levels and maintains a clear picture at night or under low-light conditions. The user can configure the SENS-UP limit by increasing/decreasing the shutter speed(e.g. : X2, X4..... X32, X64, X128, X256, X512).
- 11) **Saturation** : Control image saturation.(000 ~ 100)
- 12) **Sharpness** : Sharpness level adjustable.(00 ~ 30)
- 13) **Sync** : This function is to select video sync. The Internal and Line Lock modes are available.
 - **Phase** : Control the Phase of the image.
- 14) **Reverse** : Flip the image horizontally, vertically or both on the screen.
- 15) **Focus Set** : You can select the most suitable zoom mode
 - **Auto** : The focus automatically adjusts when the lens zooms in and out.
 - **Manual** : Changes the camera mode to Manual Focus.
 - **Z.Trigg** : Auto-focuses the camera once after the Zoom function is used.
- 16) **DIS Mode** : Compensates for any small movements of the camera caused by due to the wind and other reasonable causes.(On / Off)

3.6.2 PAN/TILT SETUP(Path : MAIN MENU / SETUP / PAN/TILT SETUP)

This is to set the functions related to PAN/TILT.

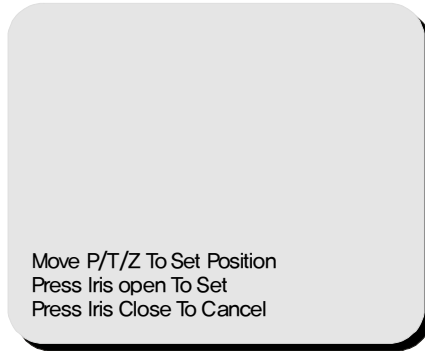
PAN/TILT SETUP -----	
Auto Flip:	On
Prop.Pan:	On
Preset Freeze:	Off
Manual Stop Limit:	Off
└ Limit Set	
Set Front	
Power On Act:	Off
Tilt Offset:	01
Back	
Exit	

- 1) **Auto Flip** : For monitoring an object moving below a camera , by running Auto Flip, moving objects can be monitored.
- 2) **Prop.Pan(Proportional Pan)** : Pan and tilt speed compensation function linked to zoom position allows fine manual operation even during zooming.
- 3) **Preset Freeze** : On running preset function, the previous preset position will be shown until the camera reaches a specified preset position to reduce the unnecessary memories and to show clean pictures.
- 4) **Manual Stop Limit** : To activate "MANUAL STOP LIMIT".



: Manual stop limit set – Set the limit of panning range.

5) **Set Front** : To memorize the front of the camera.



: Move P/T/Z to set front direction and then press the IRIS OPEN key to finish the setup.

6) **Power On Act** : Set the program to operate when the camera turns on.

7) **Tilt Offset** : Tilt range would be limited by the setting degree at both end.

3.6.3 DISPLAY SETUP(Path : MAIN MENU / SETUP / DISPLAY SETUP)

Set the displays of camera name, camera address, preset label or zoom label.

DISPLAY SETUP -----

Cam Name>	SPEED,DOME,CAM
Cam Name Disp:	On
Cam ADDR Disp:	On
Preset Label Disp:	LBL+NUM
Zoom Label Disp:	On
Clock Display:	On
Set Positions	

Back
Exit

- 1) Cam Name : Set or change the camera name.

ID SETUP -----

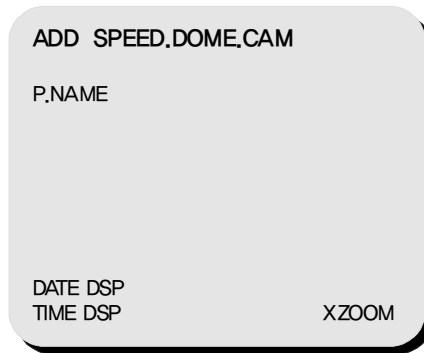
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï Ñ Ò Ó
Ô Õ Ö × Ø Ù Ú Û Ü Ý Þ à á â ã ä å æ ç è é ê ë ì í î ï ð ñ ò ó
+ - 4 / ! # * ~ , . : - ~ < > [] \$ % &
<< >> Del Clear

Display:[.....]
Set
Back

: Max, 14 characters are available. Default name is 'SPEED,DOME,CAM'

- 2) Cam Name Disp : Determines whether to display the camera ID.
- 3) Cam ADDR Disp : Determines whether to display the camera's address.
- 4) Preset Label Disp : Select the position of preset name and whether preset name displays or not.
- 5) Zoom Label Disp : Select the position of the zoom magnification and whether magnification of zoom displays or not.
- 6) Clock Display : Determines whether to display the time and date.

- 7) **Set Positions** : Move joy stick left or right to select the position of label and press "IRIS OPEN" button to confirm.

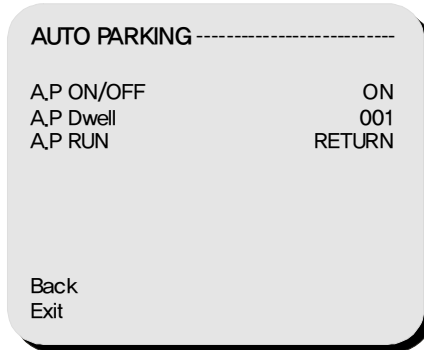


: Setting a position of ID in order of precedence (Cam Name → Cam Addr → Preset Name → Zoom → Date → Time).

Press the IRIS OPEN or MENU key to move next step.

3.6.4 AUTO PARKING(Path : MAIN MENU / SETUP / AUTO PARKING)

If auto parking is set to ON, the camera runs assigned function automatically if there is no PTZ command during assigned dwell time.



AUTO PARKING-----

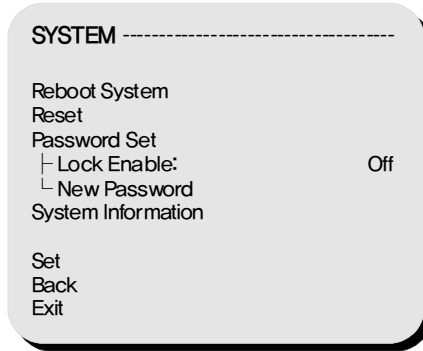
A,P ON/OFF	ON
A,P Dwell	001
A,P RUN	RETURN

Back
Exit

- 1) A,P ON/OFF : Auto parking function activate / deactivate
- 2.) A,P Dwell : Set the waiting time
- 3) A,P Run : Select the action to run with the passing of dwell time.(Return / Preset 1~5)

3.7 SYSTEM(Path : MAIN MENU / SYSTEM)

Set the camera's option.



3.7.1 REBOOT SYSTEM

Reboot system without any deletion of setting.

3.7.2 RESET

Factory reset.

〈Notice〉 Time is not change even the camera has reset.

3.7.3 PASSWORD SET

Password Set : To prevent from changing the setting values by other users, an user can use password to lock the camera. Factory default is "1 2 3 4".

〈Notice〉 Default password is "1234"

- **Lock Enable** : Locked with password.
- **New Password** : To change the previous password.

PASSWORD INPUT -----

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z
A	@	A	U	S	a	b	a	u	r	a	e	e	e	e	q	i	t	t	n	o	o	o			
0	0	0	t	b	e	A	C	A	E	1	2	3	4	5	6	7	8	9	0						

+ - 4 / ! # * ~ , . : - ~ < > [] \$ % &
 << >> Del Clear

Display: [.....]
 Set
 Back

: To save the changed password, input the previous password as below picture.

INPUT PREVIOUS PASSWORD -----

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
00A0S0ä0ä0ü0ä0ë0ë0ç0T0I0K0ö0ö
ÜÜÜ0T0B0E0A0Ç0Æ01234567890
+ - 4 / ! # * ~ , . : - ~ < > [] \$ % &
<< >> Del Clear

Display:[-----]
Set
Back

: If you selected function of the "Lock Enable" is On, You should input the password when you enter the menu

PASSWORD COMPARE -----

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 Ä Ö Å Æ Å ö Æ æ Å å Æ æ Å å Æ æ Å å Æ æ Å å
 Ü Ü Ö T B E Ä Ç Æ æ 1 2 3 4 5 6 7 8 9 0
 + - 4 / ! # * ~ , . : - ~ < > [] \$ % &
 << >> Del Clear

Display:[.....]
 Set
 Back

: If the password is corrected you can enter the menu.

3.7.4 SYSTEM INFORMATION

Currently the system is set for Speed Dome information(Model / Model Version / Camera / Camera Version, Protocol / Baudrate / TV Type) shows.

SYSTEM INFORMATION -----

Model : S200R1
 Version : 1.04
 Camera : Z937
 Camera Ver : 2.80
 Protocol : SK-P
 Baudrate : 2400
 TV Type : PAL

Press Menu To Exit.....

: MENU / IRIS OPEN key to return to the previous menu.

PELCO-D Extended Command

Hot Key description for Pelco-D Protocol user.

PELCO-D PROTOCOL EXTENDED COMMAND SET for 36X SPEED DOME CAMERA	
Preset60 Move	SET PATTERN STOP
Preset61 Move	SET PATTERN START 1
Preset62 Move	SET PATTERN START 2
Preset63 Move	SET PATTERN START 3
Preset64 Move	SET PATTERN START 4
Preset70 Move	PATTERN STOP
Preset71 Move	PATTERN RUN 1
Preset72 Move	PATTERN RUN 2
Preset73 Move	PATTERN RUN 3
Preset74 Move	PATTERN RUN 4
Preset80 Move	SEQUENTIAL STOP
Preset81 Move	SEQUENTIAL RUN 1
Preset82 Move	SEQUENTIAL RUN 2
Preset83 Move	SEQUENTIAL RUN 3
Preset84 Move	SEQUENTIAL RUN 4
Preset85 Move	SEQUENTIAL RUN 5
Preset86 Move	SEQUENTIAL RUN 6
Preset87 Move	SEQUENTIAL RUN 7
Preset88 Move	SEQUENTIAL RUN 8
Preset92 Move	SET LEFT LIMIT AT AUTO SCAN(CUSTOM)
Preset93 Move	SET RIGHT LIMIT AT AUTO SCAN(CUSTOM)
Preset94 Move	RESET(REBOOT SYSTEM)
Preset95 Move	MENU
Preset96 Move	STOP SCAN
Preset97 Move	AUTO SCAN(CUSTOM)
Preset98 Move	SEQUENTIAL RUN 1
Preset99 Move	AUTO SCAN(CUSTOM)

[Troubleshooting]

Problem	Solution
Initial operation is not working.	<ul style="list-style-type: none"> • Check the power cord and line connection. • Check the adaptor for the camera. • Is there no fuse or disconnected fuse? Check the current consumption and use the recommended fuse.
Nothing appears on the screen. The image on the screen is dim.	<ul style="list-style-type: none"> • Check the video cable and line connection. • Is dome stained with dirt? • Adjust the lens ' focus properly.
The image on the screen flickers.	<ul style="list-style-type: none"> • Is the camera facing to fluorescent lighting? Change the camera position.
The image is not clear.	<ul style="list-style-type: none"> • Adjust the sharpness feature of the camera. • Please make sure your monitor status.
The image on the screen is dark. The color of the picture is not matched.	<ul style="list-style-type: none"> • Adjust the contrast feature of the monitor. • Adjust the brightness feature of the camera. • Adjust the white balance feature of the camera.
PTZ operation is not working.	<ul style="list-style-type: none"> • Check the communication cable and line connection. • Check the number & protocol setting between the camera and controller.
Aux output is not working.	<ul style="list-style-type: none"> • Did you connect some equipment with the camera during NC or NO? Please recheck your equipment.
The time is not matched current time.	<ul style="list-style-type: none"> • Check the battery.

[Warranty Card]

PRODUCT NAME		SPEED DOME CAMERA		TERM OF THE GUARANTEE
MODEL NO.				
DATE OF PURCHASE				FOR ONE YEAR AFTER THE DATE OF PURCHASE
CUSTOMER	NAME		P/N	
	ADDRESS			
SELLER	NAME		P/N	
	ADDRESS			

THE HISTORY OF AFTER-SALES SERVICE		
YEAR	PROBLEM	PERSON IN CHARGE

※ This product will be under warranty for one year after the date of purchase.

Please read this manual carefully before installing and using the camera.
Be sure to keep the manual handy for later reference.